

Name: _____

p1103: Factoring with box when $a = \text{prime}$ (v6)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18 , until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	
2x	$2x^2$	$-12x$
3	$3x$	-18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $3x^2 + 17x + 20$.

*	x	
3x	$3x^2$	$12x$
5	$5x$	20

ANSWER: $(3x + 5)(x + 4)$

Question 2

Use the box to factor $5x^2 + 12x - 9$.

*	x	3
5x	$5x^2$	15x
-3	-3x	-9

ANSWER: $(5x - 3)(x + 3)$

Question 3

Use the box to factor $7x^2 - 52x + 21$.

*	x	-7
7x	$7x^2$	-49x
-3	-3x	21

ANSWER: $(7x - 3)(x - 7)$